

Motivating workers: how leaders apply self-determination theory in organizations

Vivien Weisz Forner, Michael Jones and Yoke Berry

Faculty of Business and Law, University of Wollongong, Wollongong, Australia, and

Joakim Eidenfalk

*Department of Arts, Social Sciences and Humanities,
University of Wollongong, Wollongong, Australia*

76

Received 25 March 2020
Revised 16 July 2020
8 October 2020
Accepted 27 October 2020

Abstract

Purpose – Self-determination theory (SDT), offers a theoretical framework for enhancing employee motivation and stimulating positive outcomes such as commitment, well-being and engagement, in organizations. This paper aims to investigate the application of SDT among leaders and delineate practical managerial approaches for supporting basic psychological needs in the workplace.

Design/methodology/approach – Participants were 51 leaders who had personally applied SDT with their own followers. Data were collected via free-listing method and analysed to extrapolate examples of SDT-application that are both practically salient and aligned to theoretic tenets of SDT.

Findings – The findings reveal how SDT is operationalized by leaders to support basic psychological needs for autonomy, competence and relatedness in the workplace. The SDT-informed management strategies are discussed in relation to the literature and alongside case scenarios to illustrate approaches for integrating elements of SDT into day-to-day management activities.

Originality/value – Despite extensive literature support for SDT, very little empirical attention has been paid to examining how the theory is applied, interpreted and/or used by practitioners in real world settings. This research is the first to draw on the lived-experience of practitioners who have applied SDT, contributes previously unexplored strategies for supporting workers' basic psychological needs and responds to calls for SDT research to identify a broader range of managerial behaviours that support employee motivation.

Keywords Leadership, Motivation, Self-determination theory, Basic psychological needs, Organization, Management, Workplace motivation, Employee motivation

Paper type Research paper

Introduction

Understanding how to motivate organizational members is a critical component of effective management. The quality of workers' motivation is predictive not only of their commitment



and work effort but also their overall engagement, well-being and performance in their job (Gagné *et al.*, 2014; Kuvaas *et al.*, 2017; Sisley, 2010; Springer, 2011). Leaders and managers play a pivotal role in shaping motivation in the workplace and facilitating these beneficial outcomes (Graves and Luciano, 2010; Miniotaitė and Bučiūnienė, 2013; Oostlander *et al.*, 2014). However, despite their critical role in initiating and sustaining motivational processes, many leaders and managers are often unsure of what to say or do to effectively engage and motivate organizational members. Traditional management approaches (Taylor, 1911) have tended to rely on leveraging authority and/or organizational reward systems to influence worker behaviour. Companies in the USA and Europe continue to increase their use (Bryson *et al.*, 2012) and spend (WorldatWork, 2018) on financial-based incentives to motivate employees. For example, employee equity ownership, just on the type of performance-pay incentive program, is estimated to be worth around \$1,061bn in the USA alone (Day and Fitton, 2008). Developments in the field of motivation have questioned the effectiveness of extrinsic rewards as motivators and research has revealed leaders can achieve superior and sustained motivational outcomes by adopting supportive interpersonal approaches and creating a positive climate for their team members (Deci *et al.*, 2017). The important question then becomes, what theoretically informed strategies can leaders and managers use to effectively motivate people in organizations?

Self-determination theory (SDT) (Ryan and Deci, 2019) is a prominent theory of motivation that offers leaders an evidence-based framework for how to effectively motivate workers. SDT delineates the social-contextual factors, including leaders' interpersonal style, that predict high quality motivation in the workplace (Deci *et al.*, 2017). The theory posits human beings have three basic psychological needs (autonomy, competence and relatedness) which are essential ingredients for motivation, well-being and optimal functioning (Deci and Ryan, 2014). When workers' basic psychological needs are met they are more likely to be autonomously motivated, that is they are personally invested in their work tasks and engage in their work activities willingly (Deci and Ryan, 2014; Van den Broeck *et al.*, 2016). The satisfaction of worker's basic psychological needs also stimulates a wide range of other beneficial work-related outcomes such as well-being, job satisfaction, commitment and performance (Arshadia, 2010; Baard *et al.*, 2004; Deci and Ryan, 2014; Van den Broeck *et al.*, 2016). SDT provides a valuable theoretic model for understanding the social-psychological impact of management in an organization. The theory also has substantial utility for leaders seeking guidance on how to motivate their followers because the three basic psychological needs delineate dimensions of the environment and provide trigger points, that facilitate positive motivational outcomes (Baard *et al.*, 2004).

Despite a large body of research support for SDT in the workplace, there is currently very little empirical guidance for leaders seeking to translate the theory into practice. To date, only a small number of articles have published practical strategies or managerial behaviours that satisfy basic psychological needs in organizations (Baard and Baard, 2009; Stone *et al.*, 2009). Furthermore, recommendations offered by academics tend to be theoretical in nature and, while helpful, may not be fully relevant or applicable given the complexities of organizations and barriers faced by managers in the field. Addressing the future direction for SDT research, Deci and Ryan (2014) called for more exploration of how managers can carry out their specific functions in ways that are need supportive rather than thwarting. The current paper contributes to addressing this gap in the literature by examining the operationalization of SDT in organizations and investigating how leaders support workers' needs for autonomy, competence and relatedness in-practice.

Self-determination theory and basic psychological needs

SDT (Deci and Ryan, 1985) is an influential theory of motivation in the twenty-first century that is concerned with understanding how to facilitate and sustain high quality motivation. According to SDT, all human beings have three basic psychological needs: autonomy, competence and relatedness. Workers are optimally motivated and experience well-being to the extent that these three needs are satisfied in their work climate (Ryan and Deci, 2002). *Autonomy* refers to workers' need to experience choice in their role, have the freedom to make decisions, express their ideas and have input in deciding how their tasks get done. The primary focus of autonomy is on people's need to be volitional and self-initiate their own actions, rather than be controlled and directed by others (Deci and Ryan, 1987). *Competence* represents workers' need to feel effective, successful and that they are good at their job (Van den Broeck et al., 2010). The need for competence is satisfied when workers have opportunities to use their skills and develop mastery of their tasks. Finally, humans are social creatures and *relatedness* reflects the need to experience a sense of belonging and feeling accepted and cared for by others (Ryan and Deci, 2017). A worker's need for relatedness is satisfied when they feel part of the group and have supportive relationships and friends at work. SDT considers autonomy, competence and relatedness to be essential ingredients for sustained motivation and nutrients for individual growth, well-being and thriving (Ryan and Deci, 2002). Leaders who enable satisfaction of these three needs promote high quality motivation where workers personally endorse and willingly participate in their work activities.

Basic psychological needs: ingredients for autonomous motivation. The satisfaction of a worker's basic psychological needs affects the type of motivation the individual has towards their job activities. When managers support autonomy, competence and relatedness, employees are more likely to be autonomously motivated (Van den Broeck et al., 2016). Autonomously motivated employees engage in their work with a full sense of willingness, understand the worth and purpose of their job and are self-determined in carrying out work tasks (Ryan and Deci, 2017). Autonomously motivated workers reliably perform better, learn better and are happier at work (Deci et al., 2017). In contrast, when a person's basic psychological needs are not met their motivation deteriorates and becomes controlled. Controlled motivation is characterized by an employee doing an activity because they feel they "have to" and/or to obtain a separable outcome (Ryan and Deci, 2017). Controlled behaviours are contingent on reward, power dynamics or driven by internal pressure such as guilt or to maintain self-esteem. Compared to controlled motivation, autonomous motivation yields better behavioural outcomes (e.g. sustained willing participation) positive subjective experiences, less job stress and higher satisfaction in the workplace (Fernet and Austin, 2014; Gagné et al., 2010).

Basic psychological needs and positive outcomes in the workplace. SDT research in organizations has shown basic psychological need satisfaction to be associated with a wide range of positive employee outcomes, beyond autonomous motivation. The satisfaction of basic psychological needs has been associated with lower turnover, improved well-being, higher job satisfaction and positive job attitudes (Gillet et al., 2012; Vansteenkiste et al., 2007). A recent meta-analysis of 99 studies reported that each of the three needs predicted lower turnover intention and were associated with higher job satisfaction, engagement and affective commitment (Van den Broeck et al., 2016). Beneficial outcomes of need satisfaction have also been found in studies conducted within the volunteer context (Haivas et al., 2012). For example, Boezeman and Ellemers (2009) examined the way in which volunteers derive their job satisfaction and intent to remain. The results showed that when volunteers

experience the satisfaction of autonomy and relatedness needs during their volunteer work, they are more satisfied with their volunteer job and that this, in turn, enhances their intent to remain a volunteer with the volunteer organization.

Overall, SDT's basic psychological needs have substantial application value because they offer leaders a simple framework outlining the conditions that promote high quality motivation and beneficial outcomes among their workers. The interpersonal approach of leaders, the way they communicate and relate to their followers, is considered paramount in creating a need-supportive climate and shaping motivation in an organization (Deci *et al.*, 1989). The critical issue for leaders, therefore, becomes understanding how they can apply SDT and support basic psychological needs in their own organizations.

A gap between self-determination theory and practice in organizations. A disconnect between theory and practice (Van De Ven and Johnson, 2006; Zaccaro and Horn, 2003) within SDT research is currently limiting leaders from diffusing this valuable knowledge into managerial practice. SDT literature in the work domain has focused primarily on theoretical testing, measurement of SDT-related constructs and investigating the model's nomological network (Deci *et al.*, 2017; Gagné and Deci, 2005; Ryan and Deci, 2019; Van den Broeck *et al.*, 2016). In contrast, very little empirical attention has been paid to examining how the theory is applied, interpreted and/or used by practitioners in real world settings. Only a few SDT-based field experiments or quasi-experiments have been undertaken in the work domain (Deci *et al.*, 1989; Forner, 2019; Hardré and Reeve, 2009; Jungert *et al.*, 2018), revealing that researchers have, thus far, done very little to integrate the theory into practically useful organizational interventions or actions. Tangible managerial behaviours or practical strategies that support workers basic psychological needs in the workplace are rarely published (Baard and Baard, 2009; Stone *et al.*, 2009) and SDT researchers have called for studies to "examine concrete workplace tasks, characteristics and managerial behaviours" (Deci *et al.*, 2017, p. 37). The immense popularity of practitioner-oriented books on motivation (Pink, 2009) highlights both the significance of this topic for business professionals and the opportunity for SDT scholars to have a greater impact on informing and shaping employee motivation practices in organizations. The current disconnect presents a problem for managers, human resources (HR) professionals and fellow academics seeking to use SDT to solve real business problems because there is limited empirical guidance to help them operationalize the theory clearly, within the complexities of strategic organizations and to take appropriate and effective action. The present research contributes towards addressing this issue.

Present research. The purpose of this paper is to investigate the application of SDT among leaders and delineate practical managerial approaches for supporting basic psychological needs in the workplace. To investigate the phenomenon of SDT-based leadership the research asks: how do leaders apply SDT, when carrying out their day-to-day managerial functions, to support workers' needs for autonomy, competence and relatedness? This study is the first draw upon the lived experience of practitioners, specifically organizational leaders, who have operationalized the theory into actions and have personally applied SDT in their organization. Consistent with engaged scholarship (Van de Ven, 2007), the study aims to leverage theoretic knowledge of SDT scholars alongside the insights and applied experience of practitioners to delineate examples of basic psychological need support that are practically salient and aligned to the theoretic tenets of SDT. In doing so, this paper contributes to bridging the theory-practice gap and further expands our understanding of what leaders do to motivate organizational members.

Method

Participants

Examples of SDT application were proposed by 51 leaders, who had learned and personally applied SDT with their own followers in the workplace. The participants were paid ($n = 22$) and volunteer ($n = 29$) leaders of emergency service organizations. They occupied leadership roles across various levels of the organization including, for example, group leaders, deputy local controllers, regional managers and managers of departments. The leaders had an average of six years ($SD = 8$) managerial experience in the volunteer/non-profit sector. A total of 76% had also gained managerial experience in corporate and public sector organizations, with an average of 8.4 years ($SD = 10.2$) managerial experience. They were aged between 25 and 62 years ($M = 44$, $SD = 10$) and had been members of the organization for an average of nine years ($SD = 8$). In total, 58% of the leaders were male and 42% were female.

Procedure

Learning and application of Self-determination theory by leaders. Prior to contributing to this study, the leaders spent nine weeks learning about and personally applying SDT in their organization. This process was facilitated through a structured SDT-based leadership intervention, comprising of three phases. The aim of the first phase was for leaders to learn the theory and consider how they would apply the model in their own organizational context. Leaders were introduced to SDT via a face-to-face training day where they received information, took part in workshop discussions, role plays and reflection exercises and created individual action plans for how they would support their followers' basic psychological needs. The learning content and the conceptual definitions of key constructs were drawn from published research (Deci *et al.*, 1989; Deci and Ryan, 2008; Stone *et al.*, 2009). Next, the leaders completed a nine-week on-the-job learning program. The purpose of this second phase was to prompt leaders to practice their new skills and knowledge in the workplace and for them to identify and try various strategies and approaches for supporting followers' basic psychological needs during their day to day management activities and reflect on their outcomes. Leaders were facilitated through three cycles of experiential learning (Kolb, 2014) where they implemented their action plan for supporting basic psychological needs, completed post-implementation reflection activities, received mentoring, revised their action plan and completed further theoretical readings. Practice-based learning and multiple delivery methods have been found to be critical for effective leadership learning (Lacerenza *et al.*, 2017). The final phase comprising a community of practice (Li *et al.*, 2009) where the leaders came together to share their experiences with each other, identify successful SDT application actions and discuss barriers and challenges they encountered. Further details and information on how the intervention was designed and delivered, including research evaluating its impact on leaders and followers, can be found in Forner (2019). The quasi-experimental research, which included the sample of leaders in the present study, showed the nine-week intervention significantly changed leaders' interpersonal orientation towards supporting basic psychological needs and improvement in the leaders was still evident one year after the training.

Data collection. Data for this present study were collected from leaders at the end of the nine-week intervention using the free-listing methodology (Quinlan, 2019). Free-listing is a well-established ethnographic method that, when coupled with an appropriate analytical technique, enables researchers to elicit and synthesize a coherent view of collective understanding of a domain and indicate which of those things are most important or salient within the group (Quinlan, 2019; Thomson *et al.*, 2012; Weller and Romney, 1988). A free list is a

mental inventory of items individuals think of within a given domain. In the generalized free-listing protocol (Bousfield and Barclay, 1950; Thomson *et al.*, 2012) participants are directed to list as many items that “come to mind” within a constrained time-period. The elicited list items are then analysed together and “salience” of each item is calculated. The free-listing activity for the present study followed the generalized protocol and was facilitated as a face-to-face group session. The participating leaders were provided with information about the purpose of the activity and instructed to list strategies and actions detailing “what leaders [...] can do to apply SDT and create an optimally motivating climate for their follower”. The exercise was constrained to 20 min and leaders were asked to draw upon their own experience of applying SDT to list as many SDT-informed actions that come to mind. The leaders developed their free lists in small groups of up to five people per group. Next, leaders were given 40 min to write short (one paragraph) case scenarios describing the implementation of two of the actions on their list. The free lists and case scenarios were written by the leaders on a paper-based template. Each group submitted a list of SDT-informed leader actions and two case scenarios. They were advised that the examples would be shared with other practising leaders to help illuminate how SDT is applied in organizations.

Analysis

A total of 42 SDT-informed leadership examples were submitted across the free lists. The submissions were analysed to identify those SDT-informed leadership examples that were both practically salient to the leaders themselves and aligned to the theoretic tenets of SDT. Firstly, a practical salience score was derived for each submission. Free-listing practical salience score analysis exposes commonalities in the collective understanding of a domain and items that are most important or salient within the culture/group (Quinlan, 2019; Thomson *et al.*, 2012). It is based on the premise that earlier listed items tend to be most familiar to the lister and also more likely to occur across multiple lists (Bousfield and Barclay, 1950), signalling their cultural salience. Following Smith (1993) and Quinlan (2019), the salience statistic was calculated by rating each submission according to its *frequency*, the number of times similar items occur across multiple lists and its *rank*, the order in which participants list their items. The frequency and rank values were combined to produce a practical salience score – an indicator of the submitted example’s practical significance to the leaders. The practical salience scores ranged between 2 and 70 with higher numbers indicating greater practical salience.

A theoretical fit score was also derived for each submission. Three experts, who had academic expertise in both SDT and leadership theory, independently evaluated the 42 free-list item submissions. Firstly, the expert categorized each submission by indicating which basic psychological needs they judged to best fit the example (i.e. autonomy, competence or relatedness). Next, they rated, on a scale from 1 (very weak fit) to 5 (strongly aligned to theory), the strength of that fit to the theory. For example, the expert rater may categorize an item to be most representative of support for autonomy, relative to competence or relatedness and might indicate that the item’s alignment to SDT’s conceptualization of autonomy is somewhat weak by, rating it a 2. Various methods have been proposed to combine experts’ ratings (Uebersax, 1993). In the present study, there was 100% consensus amongst raters on the basic psychologist need category attached to each example. The theoretical fit rating across the three experts were therefore aggregated to produce a mean theoretical fit score.

Finally, the “practical salience” and “theoretical fit values” were standardized and combined to indicate a joint theoretical and practical appraisal of each submission. This was done by first converting raw scores into *z*-scores ($z = (x - \mu) / \sigma$) and then summing the practical salience with

theoretical fit z -score derived for each example. Sample means and standard deviations for standardizing practical salience were $\mu = 18.84$, $\sigma = 17.76$ and theoretical fit were $\mu = 2.66$, $\sigma = 1.65$, respectively. The z -score enables the comparison and in this instance combination, of two scores that are from different distributions and/or scales. By using standard scores, practical salience and theoretical fit had equal weighting when summed to produce the combined score. For example, a submission with low theoretical alignment ($x = 2$, $z = -0.4$) but high practical salience ($x = 70$, $z = 2.9$) had a combined score of 2.5. Higher combined scores indicate that the submission has strong practical significance and theoretical fit.

Results and discussion of findings

In this section, we present and discuss practical examples for how leaders support autonomy, relatedness and competence in the workplace. The examples and illustrative scenarios were provided by practising leaders and draws upon their lived experience of applying SDT and supporting the basic psychological needs of their team members. This section comprises two parts. The first part, *Part A – How managers support basic psychological needs*, presents the highest scoring examples for each of the basic psychological needs, autonomy, competence and relatedness. High scoring examples are those with both strong practical significance for leaders and good alignment to the theory. To provide easily digestible information for practitioners we focus on five examples for each of the basic psychological needs. Next, in *Part B – exemplar case scenarios* we present and discuss short scenarios illustrating how need-supportive actions are implemented by leaders in day-to-day managerial practice. Three cases, composed by leader participants, describe how they applied SDT in their organizational context and implemented actions to support the basic psychological needs of their followers. Each case scenario is accompanied by a theoretical interpretation, highlighting the basic psychological needs being supported. While, Part A focuses on examples of “what” leaders do to support basic psychological needs, Part B scenarios offer a description of “how” they do it. The examples are discussed in relation to SDT, the literature and practice.

Part A. How leaders apply the principals of basic psychological needs in the workplace

Autonomy. Autonomy represents workers’ basic need to experience a sense of freedom and choice when carrying out an activity and to have some level of control in how they go about their own work (Ryan and Deci, 2000; Van den Broeck *et al.*, 2010). The hallmark of autonomy is an internal *locus* of causality (De Charms, 1968) whereby people experience ownership of their behaviours and perceive them as being self-initiated. Five practical examples, proposed by organizational leaders and managers, for how to support workers’ basic psychological need for autonomy are presented in Table 1.

The findings reveal leaders support workers’ need for autonomy by providing a platform for team members to express their ideas and suggestions. Two examples submitted by leaders included *encourage innovation* and *provide workers with*

Table 1.
How leaders support
followers’ basic
psychological need
for autonomy in the
workplace

Application examples: autonomy	Practical salience	Theoretic fit	Combined score
Encourage innovation	56	3.3	2.48
Consult with those who are affected by your decisions	42	4.3	2.30
Be less prescriptive in assigning tasks	27	4	1.27
Provide workers opportunities to express their ideas	27	3.3	0.85
Provide a rationale for decisions where possible	21	3.7	0.75

opportunities to express their ideas. Innovation is where team members generate and implement novel ideas, new processes or better ways of doing things which are useful to the team. Leadership styles that are constructive, empowering and transformational are positively associated with both creativity and innovation (Hughes *et al.*, 2018). When leaders are open to their workers' ideas and suggestions and provide a safe environment for people to express their opinions, they send a clear signal that innovation and creativity are encouraged (Ye *et al.*, 2019). Leaders sustain and enhance motivation, creativity and innovation by listening to workers' suggestions and empowering them to action their ideas or at least explore them further (Liu *et al.*, 2011; Sun *et al.*, 2012).

Providing full freedom for workers to pursue their own ideas and interests is not always realistic or desirable in the workplace. Strategies were also provided for how leaders support followers' need for autonomy when workplace tasks and decisions are handed down by the organization or manager. These examples were: *consult with those who are affected by your decisions, be less prescriptive in assigning tasks and provide a rationale for decisions where possible.* Leaders in the present study support autonomy by inviting others into the decision-making process and consulting with those who will implement or be affected by others' decisions. Greater worker participation in decision-making has been linked to beneficial outcomes such as job satisfaction and improved performance in the workplace (Grissom, 2012; Scott-Ladd *et al.*, 2006). Participative or consultative decision-making satisfies people's need for autonomy by providing a platform for them to express their ideas and feelings, as well as having input and some control in their work activities. The language leaders use in communicating their decisions and assigning tasks is also critical for supporting autonomy (Deci and Ryan, 1987). Providing a rationale or explanation for why a decision was made is one way that leaders support their followers to recognize the importance and value of a certain course of action. Previous laboratory research suggests that providing people with a meaningful rationale helps them internalize the decision, come to accept it and even autonomously endorse it (Deci *et al.*, 1994). When assigning tasks to members of the team, leaders can support autonomy and intrinsic motivation by avoiding controlling or enforcing language, such as "must" or "should" (Ryan, 1982) and instead invite workers to decide how they go about achieving the task assigned to them.

Autonomy examples represented the smallest portion (19%) of the 42 SDT-informed actions submitted by leaders. This may reflect the contextual challenges of supporting autonomy in an organizational setting. Rather than being free to do as they wish, organizational members must operate within existing structures/processes and their tasks and responsibilities are set for them by the organization. The participants in this study, for example, led organizations where workers must adhere to strict safety procedures specifying how they must carry out their tasks. The small portion of submissions focusing on autonomy may suggest it is more challenging for leaders to implement this element of the theory as they must find a way to balance autonomy with organizational requirements. While providing full autonomy is not always possible, the examples above offer ways in which leaders can provide opportunities for autonomy as often as possible in the day-to-day running of the unit. Finally, it may be that the conception of autonomy need support, as it is described within the academic literature, is less clear and practitioners find this aspect of the theory more challenging to understand and operationalize. Indeed, it can be observed that the term *autonomy* is included within many theoretically distinct SDT constructs including, for example, autonomy: a basic psychological need (Van den Broeck *et al.*, 2016), autonomy orientation: an individual difference in causality orientation (Hagger and Chatzisarantis, 2011) and, autonomy-support: an interpersonal style (Slemp *et al.*, 2018). To support the

application of SDT, it may be necessary for scholars to recognize the potential for conceptual confusion or uncertainty and seek to emphasize the points of divergence across these constructs and accentuate these in their conceptualizations and definitions.

Competence. The basic psychological need for competence represents workers' desire to feel effective and successful in their role. According to SDT, leaders support competence by creating a positive learning environment and providing opportunities for others to use their skills and further develop them through optimally challenging tasks (Deci and Ryan, 2014). Competence represented the largest portion of examples (48%) submitted by leaders in this study. This may indicate that leaders are more experienced in this area or that this element of SDT was more readily understood. Table 2 presents the five practical examples, proposed by organizational leaders and managers, for how to support workers' basic psychological need for competence.

Leaders who participated in this study support competence by creating opportunities for followers to build their skills, capabilities and self confidence in a safe and supportive environment. Two examples provided by leaders included *provide development and learning opportunities* and *let team members learn at their own pace*. There are many ways leaders can offer workers opportunities for education and personal development and these have positive motivational effects (Stone et al., 2009). For example, leaders can facilitate on-the-job learning opportunities by providing optimally challenging workplace assignments, offering team members opportunities to take on new tasks, letting someone lead a project or providing an opportunity to take on increased responsibilities (Berings et al., 2005). Being considerate to also maintain autonomy, leaders should avoid imposing development activities without consultation or involvement from the follower. Rather, leaders might take time to understand the individual development interests and needs of their team members and involve them in devising ideas and suggestions for their own learning and development activities. By understanding each followers' development aspirations, skill level and capabilities, leaders can support their followers to learn autonomously and at their own pace, further building motivational resources.

Leaders further support competence by *helping build self-esteem and confidence*, which represents another example provided by leaders in this study. Self-esteem refers to workers' overall self-evaluation of their own competencies and capabilities. Self-esteem and confidence at work are known to be affected, in part, by an individual's organizational experiences of success and communication and messages of their manager and peers (Pierce and Gardner, 2004). Successful task/work experiences, such as completing a project or achieving a milestone, will bolster self-esteem, whereas failure has the opposite effect. Messages of value and respect for the worker from the manager also contributes towards workers coming to hold a positive image of themselves. To this end, it can help build people's self-confidence in their own skills by providing optimally challenging yet achievable work goals, acknowledging progress, using people's strengths and offering authentic non-judgemental support.

Table 2.
How leaders support
followers' basic
psychological need
for competence in the
workplace

Application examples: competence	Practical salience	Theoretic fit	Combined score
Provide development/learning opportunities	50	4.3	2.75
Support and help build self-esteem and confidence	49	4.3	2.70
Offer regular positive and constructive feedback	63	3	2.69
Let team members learn at their own individual pace	12	5	1.03
Introduce mentoring opportunities	18	4	0.76

Another key strategy to support competence and promote motivation is through *offering regular positive and constructive feedback*. Positive feedback signals to the follower that they have performed well, are skilled and can succeed. Positive feedback or praise, relative to no feedback or negative feedback, is especially motivating and has been linked to higher levels of well-being, task interest and ongoing participation in the activity (Deci *et al.*, 1999; Mouratidis, 2008). The language leaders use to communicate with their follower is critical and determines whether the feedback is received positively and builds self-confidence or perceived to be controlling and diminishes motivation (Ryan and Deci, 2000). Communicating feedback in a supportive way involves being empathetic, acknowledging the follower’s feelings and difficulties and inviting them to provide their own views (Carpentier and Mageau, 2013; Ryan and Deci, 2000). In contrast, feedback that conveys external pressure focuses on enforcing rules and uses language such as “should” or “must” is controlling and undermines motivation (Ryan, 1981). Overall, both the type of feedback (positive vs negative) and the way in which it is delivered impacts upon people’s competence and motivation (Mabbe *et al.*, 2018).

Leaders further recommend supporting competence by *introducing mentoring opportunities*. Mentoring involves a supportive relationship between two members of an organization where, traditionally, a senior worker provides a more junior worker with personal and professional development (Kram, 1985). Mentoring may be formal, such as a structured program that pairs organizational members together or informally occurring across team members and networks of workers spontaneously (Higgins and Kram, 2001). The fact that both members of the relationship benefit from this form of professional development is especially valuable (Kram and Isabella, 1985). For example, the more senior worker is provided with an opportunity to demonstrate and be valued for their skills and experience while the junior member benefits by developing new skills and building their knowledge and capabilities. As such, it is expected that both parties are experiencing the satisfaction of their need for competence during mentoring activities.

Relatedness. Humans are social beings and relatedness represents the need to experience a sense of belonging and to feel accepted and cared for by others. The need for relatedness is satisfied when workers develop close relationships in the workplace and see themselves as part of the group (Van den Broeck *et al.*, 2016). Table 3 presents the five practical examples, proposed by organizational leaders and managers, for how leaders support workers basic psychological need for relatedness.

Positive social interactions and interpersonal relationships between leaders and their followers are responsible for shaping motivation and well-being at work (Deci *et al.*, 2017; Weinstein and De Haan, 2014). The importance of high-quality and authentic relationships between leaders and their followers has been emphasized in various theories of leadership (Gerstner and Day, 1997; Uhl-Bien, 2006). The examples provided by leaders in this study offer some simple interpersonal techniques for building relationships where the aim is to better understand and get to know the followers. Learning about the interests and

Application examples: relatedness	Practical salience	Theoretic fit	Combined score	Table 3. How leaders support followers’ basic psychological need for relatedness in the workplace
Implement team bonding activities	16	4.7	1.08	
Induct new members into the team	20	4.3	1.06	
Learn about workers outside of the work context	20	4.3	1.06	
Know your team members’ names, interests and skills	12	4.7	0.85	
Respect others’ background and experience	10	4.7	0.74	

circumstances of others provides opportunities to find common ground. These commonalities create opportunities for authentic conversations and create the basis for building a genuine relationship. Further to supporting basic psychological needs for relatedness, relationship building practices by leaders have other positive outcomes such as improved team effectiveness, job performance and engagement (Dunst *et al.*, 2018)

Leaders help facilitate high quality relationships among colleagues and team members by *implementing team bonding activities, inducting new members into the team*. A worker's need for relatedness is satisfied when they feel such as they belong to the group, have people who care about them and are able to care for others (Ryan and Deci, 2017). Having close friends at work has a positive impact on people's experience and satisfaction in their job and colleagues provide an important source of basic psychological needs satisfaction and motivation in the workplace (Jungert *et al.*, 2018; Moreau and Mageau, 2012). Leaders create opportunities for team socialization to facilitate the development of genuine and supportive relationships between team members. For example, social activities, such as team lunches or events, provide opportunities for new team members to interact in a relaxed and informal environment. The importance of inducting or onboarding new members into the team is also emphasized. Onboarding helps introduce and socialize newcomers and includes practices such as communication, making resources available, welcome activities, training and a guide or "buddy" assigned to help the new coming navigate their new workplace (Klein *et al.*, 2015).

Leaders also take action to promote diversity and inclusion within their team, focusing on *respecting others' background and experience*. Leaders are important role models of group expectations and may support diversity by respecting and valuing the unique strengths that members bring to the group and discussing the value and opportunities that can be realized through increased diversity. Researchers examining the interplay between leadership and team diversity stress the critical importance of matching leadership behaviours to the specific needs arising from diversity-related team processes and have proposed specific competencies, such as social perceptiveness, that allow leaders to shape the influence of diversity within the team (Homan *et al.*, 2020). Leaders also play an active role in supporting HR diversity practices, such as ensuring that opportunities for promotion and training are equitably distributed, which is conducive for employees' felt inclusion (Buengeler *et al.*, 2018).

Part B. Exemplar case scenarios

Building on the examples presented in Part A, the following presents and discusses illustrative case scenarios detailing how the SDT-informed actions are implemented in organizations. Each scenario, submitted by the leaders, describes how a leader supports their followers' basic psychological needs while carrying out day to day managerial activities. A theoretic interpretation is presented alongside each scenario to highlight where support for autonomy, competence and relatedness feature within the case. The case scenarios extend on the Part A results by offering richer more detailed depictions of need-supportive managerial behaviours and provide insights into how SDT is practised by leaders in organizations.

Scenario 1: Get to know your workers outside the work context

[Leader] Bill, embeds regular social events into the unit's calendar. At the next team meeting, he invites suggestions for social event ideas and suitable dates from the members. The calendar is distributed to all team members and displayed at the unit. Bill personally attends all the events and supports his management team to also attend.

Scenario 1 focuses on building support for relatedness by intentionally creating opportunities for social interactions among team members. The need for relatedness is satisfied when people experience a sense of belonging and develop intimate relationships

with others (Ryan and Deci, 2000). Informal social interactions at work can provide a platform for developing such relationships, for people to feel connected to each other and for leaders to connect with and learn more about their followers. This scenario also demonstrates a strategy for supporting autonomy. Rather than the leader prescribing social activities and dates, he involves the members in the process, seeking their input and supporting them to participate in the process.

Scenario 2: Ownership of projects

[Leader] Susan invites an experienced team member to take on the lead role in developing a training course on a topic of their interest. She provides information on the context and desired outcome and seeks suggestions for suitable milestones from the volunteer. The outcome will be a training package developed by volunteers themselves which could be shared with neighbouring units.

The focus of Scenario 2 is autonomy. The need for autonomy is satisfied when people experience volition and freedom to pursue their interests and exercise choice (Ryan and Deci, 2000). Offering ownership of a task empowers the follower and enables them to unleash their ideas, provide input and drive the direction of the organization. The scenario also demonstrates how a leader may balance followers' autonomy with organizational requirements. In this case, the leader provides information about organizational boundaries within which the follower will operate by outlining the context and desired outcome. The follower is then invited to contribute to developing the milestones for the project. In this manner, the leader outlines the organizational objective, together they agree on smaller goals and then the follower is empowered to lead the initiative. Support for competence is also evident in this scenario. Drawing on the volunteers' expertise in an area of their interest enables them to exercise their existing skills and develop further in a domain of work they enjoy.

Scenario 3: Mentoring new and less experienced members

Josh has never been near a flood boat and now wants to be a flood boat operator. The leader pairs him with a mentor who is also a member of their team and an experienced flood boat operator. The mentor engages by sharing knowledge and assisting to develop the theoretical foundations prior to Josh attending a boat training course. After the course the mentor does some practical exercises with him and supports him on the job

Mentoring exercises provide an ideal opportunity to support a more experienced member's competence through the sharing of knowledge and an acknowledgement of their skills and capabilities. It also serves to strengthen a sense of relatedness between members of the group over time, by providing opportunities for two members (who may not know each other well) to build a supportive and collaborative relationship.

Conclusions

SDT provides an evidence-based framework for how to effectively motivate workers in organizations (Deci *et al.*, 2017). Organizational leaders establish an optimally motivating workplace climate through satisfying their workers' basic psychological needs for autonomy, competence and relatedness (Slemp *et al.*, 2018). The findings of this research delineate examples of SDT application from practising leaders to illustrate how SDT is applied and integrated into organizational leadership.

Extending on previous predominantly theoretic SDT research, this study is the first to draw upon the lived experience of leaders and managers who have implemented SDT in their

workplace. In doing so, these findings provide new insights into how leaders interpret SDT and how the theory and its concepts are translated by practitioners in organizations. The present research departs from prior academic attempts to translate theoretically derived knowledge into recommendations and practical implication – which are increasingly criticized for being impractical, difficult to understand and underestimating the tensions and complexities that are basic conditions for managers in organizational settings (Bartunek and Rynes, 2010; Schultz and Hatch, 2005). Responding to calls (Bansal *et al.*, 2012; Gregory and Anderson, 2006; Van de Ven, 2007) for research studies to “shift from a logic of building practice from theory to one of building theory from practice” (Schultz and Hatch, 2005, p. 337), this study taps into the valuable knowledge and experiences of practitioners to extend and develop SDT to have enhanced validity and relevance in an applied setting. The findings of this study contribute previously unexplored strategies for supporting workers’ basic psychological needs and responds to calls for SDT research to identify a broader range of managerial behaviours that support employee motivation (Deci and Ryan, 2014).

The widening disconnect between theory and practice is recognized as a persistent and difficult problem in management and applied psychology research (Bansal *et al.*, 2012; Van De Ven and Johnson, 2006; Zaccaro and Horn, 2003). The present study contributes to bridging the gap from science to practice by expanding knowledge of how SDT is applied to management and leadership in the work domain. Using a collaborative form of research enquiry where researchers and practitioners co-produced knowledge (engaged scholarship; Van de Ven and Johnson, 2006), this study contributes to achieving the dual objective of both advancing a scientific discipline and enlightening professional practice (Pettigrew, 2001). The findings leverage differences in the kinds of knowledge that SDT scholars and SDT practitioners from diverse background bring to identify examples of basic psychological need support that are practical salient, usable and aligned with the theoretic tenet of SDT. The study responds to ongoing calls for research to improve the exchange of knowledge between academics and practitioners and for scholars to shift research attention towards empirical studies of knowledge from practice (Bansal *et al.*, 2012; Schultz and Hatch, 2005; Van De Ven and Johnson, 2006; Zaccaro and Horn, 2003). We propose that building knowledge and conceptual clarification about SDT application by leaders is a desirable outcome for both academics and practitioners and, therefore, much can be gained by coupling both parties in a task of mutual knowledge building. Research should continue to leverage practitioner perspectives due to their wide impact and insights they provide into the application and validity of academic constructs in highly complex and ever-changing organizations that we have today.

There are limitations of this study that must be acknowledged. Firstly, the data reflects the personal experiences of a distinct case of organizational leaders. Investigation of the phenomenon of SDT application in the present research is, therefore, constrained within the boundaries of the participants and their context. The sample of leaders who contributed the applied examples were from a very narrow sector/organizational context that may not be representative of leaders or managers in other organizations. Greater diversity of leader participants from different contexts and organizations may have provided different perspectives. The validity of the SDT application examples provided in this study is also noted as a limitation. The effect that these managerial strategies have on workers’ basic psychological need satisfaction require further empirical examination and future research should measure the motivational effects of the suggested strategies on followers.

Providing a practitioner perspective on SDT application to management, this paper bridges the gap from science to practise and from practise to science. Drawing on the lived experience of leaders who have applied SDT in the workplace, the findings

illustrate how SDT is operationalized by organizational leaders and delineates practical managerial approaches for supporting employees' basic psychological needs in the workplace. The strategies discussed in this paper offer guidance for those seeking to implement the theory in their organization. Leaders can adopt and further develop these approaches to motivate workers and improve the quality of people's experience at work.

References

- Arshadia, N. (2010). "Basic need satisfaction, work motivation, and job performance in an industrial company in Iran, Paper presented at the Procedia - Social and Behavioral Sciences.
- Baard, P. P. and Beard, S.K. (2009). "Managerial behaviors and subordinates' health: an opportunity for reducing employee healthcare costs", *Proceedings of the Northeast Business and Economics Association*, pp. 24-28.
- Baard, P.P., Deci, E.L. and Ryan, R.M. (2004). "Intrinsic need satisfaction: a motivational basis of performance and well-being in two work settings". *Journal of Applied Social Psychology*, 34(10), 2045-2068, doi: [10.1111/j.1559-1816.2004.tb02690.x](https://doi.org/10.1111/j.1559-1816.2004.tb02690.x).
- Bansal, P., Bertels, S., Ewart, T., Macconnachie, P. and O'Brien, J. (2012). "Bridging the research-practice gap". *Academy of Management Perspectives*, 26(1), pp. 73-92. doi: [10.5465/amp.2011.0140](https://doi.org/10.5465/amp.2011.0140).
- Bartunek, J.M. and Rynes, S.L. (2010). "The construction and contributions of 'implications for practice': what's in them and what might they offer?" *Academy of Management Learning and Education*, 9(1), pp. 100-117, doi: [10.5465/amle.9.1.zqr100](https://doi.org/10.5465/amle.9.1.zqr100).
- Berings, M.G.M.C., Poell, R.F. and Simons, P.R.J. (2005). "Conceptualizing on-the-job learning styles". *Human Resource Development Review*, 4(4), pp. 373-400. doi: [10.1177/1534484305281769](https://doi.org/10.1177/1534484305281769).
- Boezeman, E.J. and Ellemers, N. (2009). "Intrinsic need satisfaction and the job attitudes of volunteers versus employees working in a charitable volunteer organization", *Journal of Occupational and Organizational Psychology*, 82(4), pp. 897-914, doi: [10.1348/096317908x383742](https://doi.org/10.1348/096317908x383742).
- Bousfield, W.A. and Barclay, W.B. (1950). "The relationship between order and frequency of occurrence of restricted associative responses". *Journal of Experimental Psychology*, 40(5), p. 643. doi: [10.1037/h0059019](https://doi.org/10.1037/h0059019).
- Bryson, A., Freeman, R. and Lucifora, C. (2012). *Paying for performance: Incentive pay schemes and employees' financial participation*. London: Centre for Economic Performance, doi: [10.1093/acprof:oso/9780199669806.001.0001](https://doi.org/10.1093/acprof:oso/9780199669806.001.0001).
- Buengeler, C., Leroy, H. and De Stobbeleur, K. (2018). "How leaders shape the impact of HR's diversity practices on employee inclusion". *Human Resource Management Review*, 28(3), pp. 289-303, doi: [10.1016/j.hrmr.2018.02.005](https://doi.org/10.1016/j.hrmr.2018.02.005).
- Carpentier, J. and Mageau, G.A. (2013). "When change-oriented feedback enhances motivation, well-being and performance: a look at autonomy-supportive feedback in sport". *Psychology of Sport and Exercise*, 14(3), pp. 423-435, doi: [10.1016/j.psychsport.2013.01.003](https://doi.org/10.1016/j.psychsport.2013.01.003).
- Day, J.K. and Fitton, G.D. (2008). "Best practice long term incentive based remuneration: The Australian and international experience". Retrieved from www.pc.gov.au/inquiries/completed/executive-remuneration/submissions/sub089.pdf (accessed June 2020).
- De Charms, R. (1968). *Personal causation: the internal affective determinants of behaviour*, New York, NY: Academic Press.
- Deci, E.L. and Ryan, R.M. (1985). *Intrinsic motivation and self-determination in human behavior*, New York, NY: Plenum.
- Deci, E.L. and Ryan, R.M. (1987). "The support of autonomy and the control of behavior". *Journal of Personality and Social Psychology*, 53(6), pp. 1024-1037, doi: [10.1037/0022-3514.53.6.1024](https://doi.org/10.1037/0022-3514.53.6.1024).

- Deci, E.L. and Ryan, R.M. (2008). "Self-determination theory: a macrotheory of human motivation, development, and health". *Canadian Psychology/Psychologie Canadienne*, 49(3), pp. 182-185. doi: [10.1037/a0012801](https://doi.org/10.1037/a0012801).
- Deci, E. and Ryan, R.M. (2014). "The importance for universal psychological needs for understanding motivation in the workplace". In M. Gagne, (Ed.), *The oxford handbook of work engagement, motivation and Self-Determination theory*, New York, NY: Oxford University Press.
- Deci, E.L., Connell, J.P. and Ryan, R.M. (1989). "Self-determination in a work organization". *Journal of Applied Psychology*, 74(4), pp. 580-590. doi: [10.1037/0021-9010.74.4.580](https://doi.org/10.1037/0021-9010.74.4.580).
- Deci, E.L., Koestner, R. and Ryan, R.M. (1999). "A meta-analytic review of experiments examining the effects of extrinsic rewards on intrinsic motivation". *Psychological Bulletin*, 125(6), pp. 627-668, doi: [10.1037/0033-2909.125.6.627](https://doi.org/10.1037/0033-2909.125.6.627).
- Deci, E.L., Olafsen, A.H. and Ryan, R.M. (2017). "Self-determination theory in work organizations: the state of a science". *Annual Review of Organizational Psychology and Organizational Behavior*, 4(1), pp. 19-43, doi: [10.1146/annurev-orgpsych-032516-113108](https://doi.org/10.1146/annurev-orgpsych-032516-113108).
- Deci, E.L., Eghrari, H., Patrick, B.C. and Leone, D.R. (1994). "Facilitating internalization: the self-determination theory perspective". *Journal of Personality*, 62(1), pp. 119-142, doi: [10.1111/j.1467-6494.1994.tb00797.x](https://doi.org/10.1111/j.1467-6494.1994.tb00797.x).
- Dunst, C.J., Bruther, M.B., Hamby, D.W., Howse, R. and Wilkie, H. (2018). "Meta-analysis of the relationships between different leadership practices and organizational, teaming, leader, and employee outcomes". *Journal of International Education and Leadership*, 8(2).
- Fernet, C. and Austin, S. (2014). "Self-determination and job stress". In M. Gagne, (Ed.), *The oxford handbook of work engagement, motivation and Self-Determination theory*, New York, NY: Oxford University Press.
- Forner, V.W. (2019). "Reducing turnover in volunteer organisations: A leadership intervention based on Self-Determination Theory" (PhD Thesis), University of Wollongong. Retrieved from <https://ro.uow.edu.au/cgi/viewcontent.cgi?article=1693&context=theses1>
- Gagné, M. and Deci, E.L. (2005). "Self-determination theory and work motivation". *Journal of Organizational Behavior*, 26(4), pp. 331-362, doi: [10.1002/job.322](https://doi.org/10.1002/job.322).
- Gagné, M., Forest, J., Gilbert, M.H., Aubé, C., Morin, E. and Malorni, A. (2010). "The motivation at work scale: Validation evidence in two languages". *Educational and Psychological Measurement*, 70(4), pp. 628-646, doi: [10.1177/0013164409355698](https://doi.org/10.1177/0013164409355698).
- Gagné, M., Forest, J., Vansteenkiste, M., Crevier-Braud, L., Van den Broeck, A., Aspel, A.K., Bellerose, J., Benabou, C., Chemolli, E., Güntert, S.T. and Halvari, H. (2014). "The multidimensional work motivation scale: Validation evidence in seven languages and nine countries". *European Journal of Work and Organizational Psychology*, 24(2), pp. 1-19, doi: [10.1080/1359432x.2013.877892](https://doi.org/10.1080/1359432x.2013.877892).
- Gerstner, C.R. and Day, D.V. (1997). "Meta-analytic review of leader-member exchange theory: correlates and construct issues". *Journal of Applied Psychology*, 82(6), pp. 827-844, doi: [10.1037/0021-9010.82.6.827](https://doi.org/10.1037/0021-9010.82.6.827).
- Gillet, N., Fouquereau, E., Forest, J., Brunault, P. and Colombat, P. (2012). "The impact of organizational factors on psychological needs and their relations with well-being". *Journal of Business and Psychology*, 27(4), pp. 437-450, doi: [10.1007/s10869-011-9253-2](https://doi.org/10.1007/s10869-011-9253-2).
- Graves, L.M. and Luciano, M.M. (2010). "Effects of LMX on employee attitudes: the role of need satisfaction and autonomous motivation", Paper presented at the Academy of Management 2010 Annual Meeting – Dare to Care: Passion and Compassion in Management Practice and Research, AOM.
- Gregory, D.J. and Anderson, B.B. (2006). "Framing a theory of social entrepreneurship: building on two schools of practice and thought". In R. Mosher-Williams, (Ed.), *Research on social entrepreneurship* (pp. 39-66). ARNOVA Occasional Paper Series.

- Grissom, J.A. (2012). "Revisiting the impact of participative decision making on public employee retention". *The American Review of Public Administration*, 42(4), pp. 400-418, doi: [10.1177/0275074011404209](https://doi.org/10.1177/0275074011404209).
- Hagger, M.S. and Chatzisarantis, N.L. (2011). "Causality orientations moderate the undermining effect of rewards on intrinsic motivation". *Journal of Experimental Social Psychology*, 47(2), pp. 485-489. doi: [10.1016/j.jesp.2010.10.010](https://doi.org/10.1016/j.jesp.2010.10.010).
- Haivas, S., Hofmans, J. and Pepermans, R. (2012). "Self-determination theory as a framework for exploring the impact of the organizational context on volunteer motivation: a study of Romanian volunteers". *Nonprofit and Voluntary Sector Quarterly*, 41(6), pp. 1195-1214, doi: [10.1177/0899764011433041](https://doi.org/10.1177/0899764011433041).
- Hardré, P.L. and Reeve, J. (2009). "Training corporate managers to adopt a more autonomy-supportive motivating style toward employees: an intervention study". *International Journal of Training and Development*, 13(3), pp. 165-184. doi: [10.1111/j.1468-2419.2009.00325.x](https://doi.org/10.1111/j.1468-2419.2009.00325.x).
- Higgins, M.C. and Kram, K.E. (2001). "Reconceptualizing mentoring at work: a developmental network perspective". *Academy of Management Review*, 26(2), pp. 264-288, doi: [10.5465/amr.2001.4378023](https://doi.org/10.5465/amr.2001.4378023).
- Homan, A.C., Gündemir, S., Buengeler, C. and van Kleef, G.A. (2020). "Leading diversity: towards a theory of functional leadership in diverse teams". *Journal of Applied Psychology*, 105(10), doi: [10.1037/apl0000482](https://doi.org/10.1037/apl0000482).
- Hughes, D.J., Lee, A., Tian, A.W., Newman, A. and Legood, A. (2018). "Leadership, creativity, and innovation: a critical review and practical recommendations". *The Leadership Quarterly*, 29(5), pp. 549-569, doi: [10.1016/j.leaqua.2018.03.001](https://doi.org/10.1016/j.leaqua.2018.03.001).
- Jungert, T., Van den Broeck, A., Schreurs, B. and Osterman, U. (2018). "How colleagues can support each other's needs and motivation: an intervention on employee work motivation". *Applied Psychology*, 67(1), pp. 3-29, doi: [10.1111/apps.12110](https://doi.org/10.1111/apps.12110).
- Klein, H.J., Polin, B. and Leigh Sutton, K. (2015). "Specific onboarding practices for the socialization of new employees". *International Journal of Selection and Assessment*, 23(3), pp. 263-283, doi: [10.1111/ijasa.12113](https://doi.org/10.1111/ijasa.12113).
- Kolb, D.A. (2014). *Experiential learning: Experience as the source of learning and development*, 2nd ed., Upper Saddle River, NJ: Pearson FT Press.
- Kram, K.E. (1985). *Mentoring at work: Developmental relationships in organizational life*, Lanham: University Press of America.
- Kram, K.E. and Isabella, L.A. (1985). "Mentoring alternatives: the role of peer relationships in career development". *Academy of Management Journal*, 28(1), pp. 110-132, doi: [10.5465/256064](https://doi.org/10.5465/256064).
- Kuvaas, B., Buch, R., Weibel, A., Dysvik, A. and Nerstad, C.G.L. (2017). "Do intrinsic and extrinsic motivation relate differently to employee outcomes?" *Journal of Economic Psychology*, 61, pp. 244-258, doi: [10.1016/j.joep.2017.05.004](https://doi.org/10.1016/j.joep.2017.05.004).
- Lacerenza, C.N., Reyes, D.L., Marlow, S.L., Joseph, D.L. and Salas, E. (2017). "Leadership training design, delivery, and implementation: a meta-analysis", *Journal of Applied Psychology*, 102(12), pp. 1686-1718, doi: [10.1037/apl0000241](https://doi.org/10.1037/apl0000241). [10.1037/apl0000241.supp](https://doi.org/10.1037/apl0000241.supp).
- Li, L.C., Grimshaw, J.M., Nielsen, C., Judd, M., Coyte, P.C. and Graham, I.D. (2009). "Evolution of wenger's concept of community of practice". *Implementation Science*, 4(1), pp. 1-8, doi: [10.1186/1748-5908-4-11](https://doi.org/10.1186/1748-5908-4-11).
- Liu, D., Chen, X.P. and Yao, X. (2011). "From autonomy to creativity: A multilevel investigation of the mediating role of harmonious passion". *Journal of Applied Psychology*, 96(2), pp. 294-309. doi: [10.1037/a0021294](https://doi.org/10.1037/a0021294).
- Mabbe, E., Soenens, B., De Muynck, G.J. and Vansteenkiste, M. (2018). "The impact of feedback valence and communication style on intrinsic motivation in middle childhood: Experimental evidence and generalization across individual differences". *Journal of Experimental Child Psychology*, 170, pp. 134-160, doi: [10.1016/j.jecp.2018.01.008](https://doi.org/10.1016/j.jecp.2018.01.008).

- Miniotaitė, A. and Būčiūnienė, I. (2013). "Explaining authentic leadership work outcomes from the perspective of self-determination theory". *Management of Organizations: Systematic Research*, 65, pp. 63-75.
- Moreau, E. and Mageau, G.A. (2012). "The importance of perceived autonomy support for the psychological health and work satisfaction of health professionals: not only supervisors count, colleagues too". *Motivation and Emotion*, 36(3), pp. 268-286, doi: [10.1007/s11031-011-9250-9](https://doi.org/10.1007/s11031-011-9250-9).
- Mouratidis, A. (2008). "The motivating role of positive feedback in sport and physical education: evidence for a motivational model". *Journal of Sport and Exercise Psychology*, 30(2), pp. 240-268, doi: [10.1123/jsep.30.2.240](https://doi.org/10.1123/jsep.30.2.240).
- Oostlander, J., Guentert, S.T., van Schie, S. and Wehner, T. (2014). "Leadership and volunteer motivation: a study using self-determination theory". *Nonprofit and Voluntary Sector Quarterly*, 43(5), pp. 869-889, doi: [10.1177/0899764013485158](https://doi.org/10.1177/0899764013485158).
- Pettigrew, A.M. (2001). "Management research after modernism". *British Journal of Management*, 12(s1), pp. S61-S70. doi: [10.1111/1467-8551.12.s1.8](https://doi.org/10.1111/1467-8551.12.s1.8).
- Pierce, J.L. and Gardner, D.G. (2004). "Self-esteem within the work and organizational context: a review of the organization-based self-esteem literature". *Journal of Management*, 30(5), pp. 591-622, doi: [10.1016/j.jm.2003.10.001](https://doi.org/10.1016/j.jm.2003.10.001).
- Pink, D.H. (2009). *Drive: the surprising truth about what motivates us*, New York, NY: Riverhead Books.
- Quinlan, M.B. (2019). "The freelisting method". In Liamputtong P., (Ed.) *Handbook of research methods in health social sciences*, Singapore: Springer.
- Ryan, R.M. (1981). "An exploration of the controlling and informational components of interpersonal and intrapersonal communications" (Unpublished doctoral dissertation). University of Rochester.
- Ryan, R.M. (1982). "Control and information in the intrapersonal sphere: An extension of cognitive evaluation theory". *Journal of Personality and Social Psychology*, 43(3), pp. 450-461, doi: [10.1037/0022-3514.43.3.450](https://doi.org/10.1037/0022-3514.43.3.450).
- Ryan, R.M. and Deci, E.L. (2000). "Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being". *American Psychologist*, 55(1), pp. 68-78. doi: [10.1037/0003-066X.55.1.68](https://doi.org/10.1037/0003-066X.55.1.68).
- Ryan, R.M. and Deci, E.L. (2002). "Overview of self-determination theory". In Deci, E.L. and Ryan, R.M. (Eds), *Handbook of Self-Determination research*, Rochester: University of Rochester Press.
- Ryan, R.M. and Deci, E.L. (2017). *Self-Determination theory: Basic psychological needs in motivation, development, and wellness*, New York, NY: Guilford Publications.
- Ryan, R.M. and Deci, E.L. (2019). "Chapter four – brick by brick: The origins, development, and future of self-determination theory". In Elliot, A.J. (Ed.) *Advances in motivation science* (Vol. 6). Elsevier.
- Schultz, M. and Hatch, M.J. (2005). "Building theory from practice". *Strategic Organization*, 3(3), p. 337. doi: [10.1177/1476127005055795](https://doi.org/10.1177/1476127005055795).
- Scott-Ladd, B., Travaglione, A. and Marshall, V. (2006). "Causal inferences between participation in decision making, task attributes, work effort, rewards, job satisfaction and commitment". *Leadership & Organization Development Journal*, 27(5), pp. 399-414, doi: [10.1108/01437730610677990](https://doi.org/10.1108/01437730610677990).
- Sisley, R. (2010). "Autonomous motivation and well-being: As alternative approach to workplace stress management". *New Zealand Journal of Employment Relations*, 35(2), pp. 28-40.
- Slemp, G.R., Kern, M.L., Patrick, K.J. and Ryan, R.M. (2018). "Leader autonomy support in the workplace: A meta-analytic review". *Motivation and Emotion*, 42(5), pp. 706-724. doi: [10.1007/s11031-018-9698-y](https://doi.org/10.1007/s11031-018-9698-y).
- Smith, J.J. (1993). "Using ANTHOPAC 3.5 and a spread-sheet to compute a free-list salience index". *Cultural Anthropology Methods*, 5(3), pp. 1-3.
- Springer, G.J. (2011). "A study of job motivation, satisfaction, and performance among bank employees". *Journal of Global Business Issues*, 5(1), pp. 29-42.

- Stone, D.N., Deci, E.L. and Ryan, R.M. (2009). "Beyond talk: Creating autonomous motivation through self-determination theory". *Journal of General Management*, 34(3), pp. 75-91. doi: [10.1177/030630700903400305](https://doi.org/10.1177/030630700903400305).
- Sun, L.Y., Zhang, Z., Qi, J. and Chen, Z.X. (2012). "Empowerment and creativity: A cross-level investigation". *The Leadership Quarterly*, 23(1), pp. 55-65. doi: [10.1016/j.leafqua.2011.11.005](https://doi.org/10.1016/j.leafqua.2011.11.005).
- Taylor, F.W. (1911). *The principles of scientific management*, New York, NY: Harper and Brothers.
- Thomson, D., Kaka, A., Pronk, L. and Alalouch, C. (2012). "The use of freelisting to elicit stakeholder understanding of the benefits sought from healthcare buildings". *Construction Management and Economics*, 30(4), pp. 309-323, doi: [10.1080/01446193.2012.658824](https://doi.org/10.1080/01446193.2012.658824).
- Uebersax, J.S. (1993). "Statistical modeling of expert ratings on medical treatment appropriateness". *Journal of the American Statistical Association*, 88(422), pp. 421-427, doi: [10.2307/2290320](https://doi.org/10.2307/2290320).
- Uhl-Bien, M. (2006). "Relational leadership theory: Exploring the social processes of leadership and organizing". *The Leadership Quarterly*, 17(6), pp. 654-676, doi: [10.1016/j.leafqua.2006.10.007](https://doi.org/10.1016/j.leafqua.2006.10.007).
- Van de Ven, A.H. (2007). *Engaged scholarship: a guide for organizational and social research*, New York, NY: Oxford University Press.
- Van De Ven, A.H. and Johnson, P.E. (2006). "Knowledge for theory and practice". *Academy of Management Review*, 31(4), pp. 802-821, doi: [10.5465/AMR.2006.22527385](https://doi.org/10.5465/AMR.2006.22527385).
- Van den Broeck, A., Ferris, D.L., Chang, C.H. and Rosen, C.C. (2016). "A review of self-determination theory's basic psychological needs at work". *Journal of Management*, 42(5), pp. 1195-1229, doi: [10.1177/0149206316632058](https://doi.org/10.1177/0149206316632058).
- Van den Broeck, A., Vansteenskiste, M., Witte, H.D., Soenens, B. and Lens, W. (2010). "Capturing autonomy, competence, and relatedness at work: Construction and initial validation of the work-related basic need satisfaction scale". *Journal of Occupational and Organizational Psychology*, 83(4), p. 981. doi: [10.1348/096317909X481382](https://doi.org/10.1348/096317909X481382).
- Vansteenkiste, M., Neyrinck, B., Niemiec, C.P., Soenens, B., De Witte, H. and Van den Broeck, A. (2007). "On the relations among work value orientations, psychological need satisfaction and job outcomes: A self-determination theory approach". *Journal of Occupational and Organizational Psychology*, 80(2), pp. 251-277. doi: [10.1348/096317906X111024](https://doi.org/10.1348/096317906X111024).
- Weinstein, N. and De Haan, C.R. (2014). "On the mutuality of human motivation and relationships". In Weinstein, N. (Ed.) *Human motivation and interpersonal relationships: Theory, research, and application*, London: Springer.
- Weller, S.C. and Romney, A.K. (1988). "Defining a domain and free listing". *Systematic data collection: Qualitative research methods* (Vol. 10). Newbury Park, CA: SAGE Publications.
- WorldatWork. (2018). "Incentive pay practices: Privately held companies". Retrieved from www.worldatwork.org/docs/surveys/Survey%20Brief%20-%202017%20Incentive%20Pay%20Practices-%20Privately%20Held%20Compaies.pdf?language_id=1 (accessed June 2020).
- Ye, Q., Wang, D. and Guo, W. (2019). "Inclusive leadership and team innovation: The role of team voice and performance pressure". *European Management Journal*, 37(4), pp. 468-480, doi: [10.1016/j.emj.2019.01.006](https://doi.org/10.1016/j.emj.2019.01.006).
- Zaccaro, S.J. and Horn, Z.N.J. (2003). "Leadership theory and practice: Fostering an effective symbiosis". *The Leadership Quarterly*, 14(6), pp. 769-806, doi: [10.1016/j.leafqua.2003.09.009](https://doi.org/10.1016/j.leafqua.2003.09.009).

About the authors

Vivien Weisz Forner (PhD, BPsych) is an Organizational Psychologist and Researcher in the Faculty of Business at the University of Wollongong. Her research focuses on leadership, motivation and workplace contexts that promote human well-being and thriving. Vivien has over 10 years' experience designing, implementing and evaluating leadership and applied psychology interventions within mental health, emergency management, insurance, aged care, education and not-for-profit organizations. She has held a state committee role within Australian Psychological Society's (APS)

College of Organizational Psychology and is a member of the International Positive Psychology Association and International Leadership Association. Vivien Weisz Forner is the corresponding author and can be contacted at: vivief@uow.edu.au

Michael Jones [BComm (hons), PhD] is an Associated Professor and has been teaching and researching in areas of organization, business and management for 18 years. Michael has developed research interests in organizational behaviour, group dynamics, doctoral studies, organizational culture and motivation and commitment. Michael also has research strengths in areas of qualitative analysis and has written several papers on various qualitative methodologies and methods. He is a member of the Australia and New Zealand Academy of Management, the Australian Human Resources Institute and the Industrial Relations Society of Australia.

Yoke Berry (PhD) was Project Manager for a Bushfire and Natural Hazards Cooperative Research Centre grant in the Faculty of Business, University of Wollongong. In this function, she contributed to research into retention and engagement of volunteers in emergency service agencies. She has a PhD in Chemistry and has extensive experience in natural products, organic and protein chemistry. She is a qualified secondary school educator in science.

Joakim Eidenfalk (PhD) teaches and researches in the Faculty of Law Humanities and the Arts at the University of Wollongong. Joakim has been teaching and researching international relations, politics, history and security studies for 10 years. Joakim has an interest in foreign policy, security policy, political leadership, decision-making and international relations theory. He has a PhD in Politics, a master's degree in International Relations and a master's degree in Politics. Joakim is also interested in teaching improvement and innovation.